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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/519,003

12/27/2004

Shinji Naruse

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WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER

ALEJANDRO, RAYMOND

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

10/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/519,003

Applicant(s)

NARUSE, SHINJI

Examiner

Raymond Alejandro

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1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/27/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Information Disclosure Statement

2. The information disclosure statement filed 12/27/04 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Objections

3. Claims 1-5 and 9 are objected to because of the following informalities: the recitation "*selected from...*" should be changed to "*selected from the group consisting of...*" is applicant intends to recite a Markush claim limitation. Appropriate correction is required.
4. Claim 6 is objected to because of the following informalities: all abbreviations should be changed to a non-abbreviated form of the limitation so as to have a better understanding of the claim. Appropriate correction is required.
5. Claim 6 is objected to because of the following informalities: all parenthesis [i.e. (...)] should be removed so as to have a better understanding of the specific limitation intended by the applicant. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 9 recites the limitation "a separator" in line 1. There is insufficient antecedent basis for this limitation in the claim. Claim 1 contains an earlier recitation thereof.

9. Claim 9 recites the limitation "the resultant solution or dispersion" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: immediately uncertain from the claim language is whether "the one substance" per se or "silicon compounds" per se is previously dissolved or dispersed in water; and whether the dissolving or dispersing is an intended step of "the following steps" apparently recited by the applicant. Is the dissolving or dispersing a positively claimed step? And which one is dissolved or dispersed in water?

11. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: it is immediately unclear when the assemblage of the separator integrated with a part takes place so as to form "the assembled whole part". That is to say,

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unknown is whether the separator integrated with a part is the same or not as the assembled whole part. Further clarification is required.

12. Claim 11 provides for the use of a separator in an electrical/electronic parts, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 11 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being CLEARLY anticipated by Jen et al 2001/0036573.

The present application is to a separator wherein the disclosed inventive concept comprises the coating material on the separator.

On the matter of claims 1 and 4:

1st interpretation: Jen et al disclose a separator made of either release films or on woven glass fabric being coated with silicone particles such as silica (P0053-0055).

Specifically, Jen et al disclose the preparation of separators (P0052) comprising preparing predetermined solutions including silicone particles such as silica (P0053-0055) in a solvent; mixing the solutions; thereafter, the mixed solutions were coated on a release films or on woven glass fabric; after the coated fabric were dried a separator with certain thickness was obtained.

2nd interpretation: Jen et al also disclose the preparation of cathodes and anodes including coating carbon fabric non-woven webs (P0046 & 0051) with a solution prepared with ionic substances such as PVDF or acetone, or LiCoO₂, or carbon black (P0042-0046), or DBP, or graphite, or carbon, PVDF or acetone (P0047-0051). *In this instance, either the anode or the cathode itself is taken as a coated separating element or a coated element capable of separating other components within the battery cell. For example, cathode 201 separates feature 203 from feature 205; and anode 202 separates feature 203 from feature 204 (See **FIGURE 2A & P0059**).*

On the matter of claims 2-3:

Examiner's note: in this instance, it is noted that the dependent claims 2-3 properly further limit alternative coating substances without requiring that the coating substances actually be present. In that, it is asserted that independent claims 2-3 recite plural components which must be chosen from three lists of group members. Therefore, the examiner states that the dependent claims are interpreted as not requiring the presence of a particular member of group members recited in the independent claims. That is, the dependent claims further limits "hydroxyl group containing substances" and "ionic substances" when they are chosen as the "at least one substance" of the specified materials, but those dependent claims do not actually require that the

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specific “hydroxyl group containing substances” and “ionic substances” be chosen. [See MPEP 608.1(n), subpart III and 2173.05(h)].

On the matter of claim 5:

Jen et al disclose a separator is made of either release films or on woven glass fabric (P0053-0054); or carbon fabric non-woven webs (P0046 & 0051). *In this case, the release films can be taken as either the porous film or a composite of films, and the woven glass fabric can be taken as a porous film.*

On the matter of claim 6:

Jen et al disclose that glass fabric can be used to make the separator (P0055); or graphite, or carbon (P0047-0051).

On the matter of claim 7:

The separator of Jen et al is dried in a furnace at a specific temperature (P0055). Thus, it is subjected to a heat treatment.

Nonetheless, as to the method limitation “subject to heat treatment before and/or after coated”, it is noted that a method limitation incorporated into a product claim does not patentable distinguish the product because what is given patentably consideration is the product itself and not the manner in which the product was made. Therefore, the patentability of a product is independent of how it was made. As a result, the process steps of a product-by-process claim do not impart any significant property or structure to the claimed end product. And, if there is any difference, the difference would have been minor and obvious. Determination of patentability of a product-by-process claim is based on the scope of the product itself.

“[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does

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not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process."

In re Thorpe 777 F.2d 695, 698, 227 USPQ 964,966 (Fed Cir. 1985) and MPEP 2113.

On the matter of claim 8:

Jen et al disclose a separator made of either release films or on woven glass fabric being coated with silicone particles such as silica (P0053-0054). Thus, the specific "sucking height" (or electrolyte retention) is deemed to be an inherent property or characteristic of the separator which is associated to the construction material thereof and its coating. For instance, applicant states that "The separator of this invention which has been coated in the aforementioned manner has good electrolyte retention owing to coating". "The electrolyte retention of the coated separator of this invention as shown by the above-mentioned formula (1) [equation 1 $\rightarrow h^2\eta/\gamma$] is 0.7 mm or more" (See applicant's specification at page 5, lines 3-21). Thus, having been made both separators (applicant's separator and Jen et al's separator) of the same construction material, then, it can be fairly argued that the separator of the prior art must have the same properties.

Accordingly, products of identical chemical composition can not have mutually exclusive properties, and thus, the claimed property (i.e. the specific "sucking height" or electrolyte retention), is necessarily present in the prior art material.

"Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).*

See MPEP 2112.01 [R-3] Composition, Product, and Apparatus Claims

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On the matter of claims 9-10:

Jen et al disclose the preparation of separators (P0052) comprising preparing predetermined solutions including silicone particles such as silica (P0053-0054) in a solvent; mixing the solutions; thereafter, the mixed solutions were coated on a release films or on woven glass fabric; after the coated fabric were dried a separator with certain thickness was obtained. *In this case, it is noted that either the release films or the woven glass fabric are integrated with another part of itself (the release films include more than one film together, and the glass fabric is constituted by more one component forming the fabric material.*

On the matter of claim 11:

The separator of Jen et al is used as an electrical part of an electrical device such as a battery (ABSTRACT/P0011, 0069/EXAMPLE 5).

Thus, the present claims are anticipated.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Alejandro whose telephone number is (571) 272-1282. The examiner can normally be reached on Monday-Thursday (8:00 am - 6:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Raymond Alejandro
Primary Examiner
Art Unit 1795


RAYMOND ALEJANDRO
PRIMARY EXAMINER